Marker	Type	Location	Landmarks	Primer	SEQ. ID NO.	Direction	Enzyme	Reference
Tapasin	ms	0.10		HEC CTG TAA TCC CAG CTA CTC AAT CG	1	forward		This work based on GenBank Z97183
				GGG AGA CTT AAA CAG CAG AAA TGT	2	reverse		
HKE 6	ms	0.22		TET TCG GGA TCA TTT CAG TAA TCT	3	forward		Kikuti et al., *Genomics* 42:422-435 (1997). This work based on GenBank D84401
				GGG ATC CGC TGT AAC TCT	4	reverse		
		0.35	HLA-DPB1					
Tap1	ms	0.6		HEX GGA CAA TAT TTT GCT CCT GAG G	5	forward		GDB ID G00-250-903; Carrington & Dean, *Human Molecular Genetics* 3:218 (1994)
				GCT TTG ATC TCC CCC CTC	6	reverse		
		0.75	HLA-DQB1					
		0.83	HLA-DRB1					
HLA-DRA	snp	1.0		GAG CTC GGG AGT GAG GCA GAA CAG	7	forward	DdeI	Elkaou et al., *Nucleic Acids Res.* 18:7195 (1990)
				TGA GGT GTG TTC ATT AGT CAA CTC	8	reverse		
Notch4	ms	1.2		FAM CGT CTC TAT TTG GGC AGT GAG	9	forward		Sugaya et al., *Gene* 189:235-244 (1997)
				GGC CGA GGA GGA AGA AGA	10	reverse		
HSP-HOM	snp	1.6		CCG GAT CCC ATA GGC CTC AGA GAA CC	11	forward	NcoI	Milner & Campbell, *Immunogenetics* 36:357-362 (1992)
				GTA ACT TAG ATT CAG GTC TGG	12	reverse		
D6S273	ms	1.7		FAM ACC AAA CTT CAA ATT TTC GG	13	forward		GDB id G00-133-162; AFM142xh6; Gyapay et al., *Nature Genetics* 7:246-339 (1994)
				GCA ACT TTT CTG TCA ATC CA	14	reverse		
Bat2	ms	1.8		HEX GGA GCT AAA AGT TCT AAC TC	15	forward		This work based on GenBank Z15025
				TGT CTC AAA ATA TTA ATG TG	16	reverse		

Figure 1A

Marker	Type	Location	Landmarks	Primer	SEQ. ID NO.	Direction	Enzyme	Reference
LST1	snp	1.84		TAG TAA TTT GTT GGG TGA ATG ACA	17	forward	PvuII	DeBaey et al., *Human Immunol.* 42:9-14 (1994). This work based on GenBank U00921
				CAC ACT GCC ACT CCT CAG AT	18	reverse		
TNFd	ms	1.84		TET CAT AGT GGG ACT CTG TCT CCA AAG	19	forward		Nedospasov et al., *J.Immunol.* 147:1053-1059 (1991);Udalova et al., *Genomics* 16:180-186 (1993)
				AGA TCC TTC CCT GTG AGT TCT GCT	20	reverse		
TNFe	ms	1.84		TET GTG CCT GGT TCT GGA GCC TCT C	21	forward		Nedospasov et al., *supra,* (1991); Udalova et al., *supra,* (1993)
				TGA GAC AGA GGA TAG GAG AGA CAG	22	reverse		
			TNFα					
TNFc	ms	1.86	TNFβ	HEX GGT TTC TCT GAC TGC ATC TTG TCC	23	forward		Nedospasov et al., *supra,* (1991); Udalova et al., *supra,* (1993)
				TCA TGG GGA GAA CCT GCAGAG AA	24	reverse		
TNFa	ms	1.86		HEX CCT CTC TCC CCT GCA ACA CAC A	25	forward		Nedospasov et al., *supra,* (1991); Udalova et al., *supra,* (1993)
				GCC TCT AGA TTT CAT CCA GCC ACA	26	reverse		
TNFb	ms	1.86		HEX GTG TGT GTT GCA GGG GAG AGA G	27	forward		Nedospasov et al., *supra,* (1991); Udalova et al., *supra,* (1993)
				GCA CTC CAG CCT AGG CCA CAG A	28	reverse		
MICA	ms	2.1		TET ACA ATG GAC ACT TGG GTT ACT	29	forward		Mizuki et al., *Diabetes* 47:263-269 (1997)
				AAT GAG ATG CCA CCT GAA A	30	reverse		
		2.1	HLA-B					
		2.2	HLA-C					
C2-4-4	ms	2.4		TET TTA TCT ACT TAT AGT CTA TCA CGG	31	forward		Tamiya et al., *Tissue Antigens* 51:337-346 (1998)
				GGC TTG ACT TGA AAC TCA GAG ACC	32	reverse		

Figure 1B

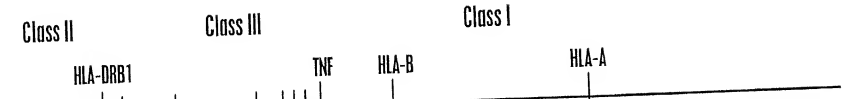
Marker	Type	Location	Landmarks	Primer	SEQ. ID NO.	Direction	Enzyme	Reference
TUBB	ms	2.5-2.7		FAM GAT CGC TCA CCA GCA CAC TGG CTA T	33	forward		Zuliani & Hobbs, *Am J Hum Genet.* 46:963-969 (1990); This work based on GenBank X00734
				CTG GGC AAC AGA GCG AGC TCC GTC T	34	reverse		
C3-2-11	ms	2.9		FAM TCC TTA CAG CAG AGA TAT GTG G	35	forward		Tamiya et al., *supra*, (1998)
				AGA TGG CAT TTG GAG AGT GCA G	36	reverse		
		3.4	HLA-A					
D6S510	ms	3.4		FAM CAA CAC ACT GAT TTC CAT AGC	37	forward		GDB id GDB-249-443; Gondon et al., *Human Molecular Genetics* 3:1210 (1994)
				AAT GGG CTA CTA CTT CAC ACC	38	reverse		
MOG11	ms	3.9		HEX GAA ATG TGA GAA TAA AGG AGA	39	forward		Roth et al., *Human Immunol.* 43:276-282 (1995)
				GAT AAA GGG GAA CTA CTA CA	40	reverse		

Figure 1C

Association of MHC markers in the Jewish case-control panel

Marker	Number of alleles	P	Allele	Allele Frequency	
				CD	Control
Tapasin	12	0.88			
HKE6	9	0.90			
Tap1	9	0.44			
HLA-DRA	2	0.021			
Notch4	7	0.011	2	35%	25%
HSP-HOM	2	0.12			
D6S273	7	0.84			
Bat2	12	0.12			
LST1	2	0.30			
TNFd	6	0.34			
TNFe	3	0.23			
TNFc	2	0.33			
TNFa	13	0.37			
TNFb	5	0.78			
MICA	11	0.87			
C2-4-4	11	0.70			
TUBB	5	0.014	4	5%	37%
C3-2-11	20	0.92			
D6S510	9	0.79			
MOG11	10	0.31			

Figure 2



HLA-DRA	Notch4	Hsp-HOM	D6S273	Bat2	LST1	p	Transmitted	Not Transmitted	Odds Ratio (95%CI)
2						0.49	19	15	1.27 (0.58, 2.79)
	2					0.011	31	15	2.07 (4.03, 4.24)
2	2					0.050	15	6	2.5 (0.83, 8.41)
	2	2				0.0044	29	11	2.64 (1.2, 6.05)
		2	4			0.22	32	23	1.39 (0.76, 2.56)
			4	5		0.025	5	0	10 (0.5, 58)
				5	1	0.029	13	4	43.25 (0.88, 15.2)
2	2	2				0.050	15	6	2.5 (0.83, 8.41)
	2	2	4			0.00097	16	2	8.0 (1.55, 100)
		2	4	5		0.025	5	0	10.0 (0.5, 58)
			4	5	1	0.025	5	0	10.0 (0.5, 58)

Figure 3